CURRENT AND PENDING (OTHER) SUPPORT INFORMATION

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person.

*NAME: Hirsch, Andrew Karl

PERSISTENT IDENTIFIER (PID) OF THE SENIOR/KEY PERSON: https://orcid.org/0000-0003-2518-614X

*POSITION TITLE: Assistant professor

*ORGANIZATION AND LOCATION: University at Buffalo, SUNY, Buffalo, New York, United States

Proposals/Active Projects

*Proposal/Active Project Title:	Collaborative Research: SHF: Empowering Choreographic Process Polymorphism
*Status of Support:	Current
Proposal/Award Number:	
*Source of Support:	NSF
*Primary Place of Performance:	Buffalo
*Proposal/Active Project Start Date: (MM/YYYY):	05/2026
*Proposal/Active Project End Date: (MM/YYYY):	05/2029
*Total Anticipated Proposal/Project Amount:	$400,000

* Person Months per budget period Devoted to the Proposal/Active Project:

Year	Person Months
2026	1
2027	1
2028	1

*Overall Objectives: This project seeks to increase the expressivity of choreographic programming languages by expanding on process polymorphism. It discusses new choreographic primitives, efficient implementation, and new theory.

*Statement of Potential Overlap: This is the current project.

*Proposal/Active Project Title:	CAREER: Choreographic Type Theory and Practice

*Status of Support: Pending

Proposal/Award Number: 2542302

*Source of Support: NSF

*Primary Place of Performance: University at Buffalo

*Proposal/Active Project Start Date: (MM/YYYY): 04/2026

*Proposal/Active Project End Date: (MM/YYYY): 04/2031

*Total Anticipated Proposal/Project Amount: $532,992

* Person Months per budget period Devoted to the Proposal/Active Project:

Year	Person Months
2026	1
2027	1
2028	1
2029	1
2030	1

*Overall Objectives: This project seeks to develop choreographic type theory in order to enable verification of concurrent software. It will do so by developing choreographic type theory, categorical models to enable metatheoretic reasoning, and a proof-of-concept proof assistant.

*Statement of Potential Overlap: This project is about building new reasoning principles for and using choreographies, whereas the current project is about expanding the expressivity of choreographies. While there is room for cross-pollination, there is no overlap.

*Proposal/Active Project Title: SHF: Small: Open Choreographies via Session Types

*Status of Support: Pending

Proposal/Award Number: 2512151

*Source of Support: NSF

*Primary Place of Performance: University at Buffalo

*Proposal/Active Project Start Date: (MM/YYYY): 07/2025

*Proposal/Active Project End Date: (MM/YYYY): 06/2028

*Total Anticipated Proposal/Project Amount: $598,636

* Person Months per budget period Devoted to the Proposal/Active Project:

Year	Person Months

Year	Person Months
2026	1
2027	1
2028	1

*Overall Objectives: This project aims to build open choreographies, which allow programmers to write distributed systems where some nodes are codesigned while other nodes are external. Current choreographies allow programmers to write all-codesigned system with strong deadlock-freedom guarantees; we want to maintain those guarantees while allowing an open world.

*Statement of Potential Overlap: This project seeks to expand the ability of choreographies to act with agents NOT codesigned with the choreography, while the current proposal focuses on expanding the expressivity of codesigned agents within a choreography. There is synergy, but little overlap.

Certification:

I certify that the information provided is current, accurate, and complete. This includes but is not limited to current, pending, and other support (both foreign and domestic) as defined in 42 U.S.C. § 6605.

I also certify that, at the time of submission, I am not a party to a malign foreign talent recruitment program.

Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Hirsch, Andrew in SciENcv on 2025-09-08 21:34:09